

Appln. No. 10/822,932  
Amdt. Dated: April 13, 2004  
Reply to Office action of February 21, 2007

### **REMARKS/ARGUMENTS**

Claims 1 – 6 are currently canceled and newly added claims 7 – 9 are pending. The newly added claims are supported by the description in the present specification at paragraphs [0011], [0014], and [0042]. No new matter has been added.

This communication is responsive to the Office Action with a mailing date of February 21, 2007. The Examiner rejected claims 1 – 6 under 35 U.S.C. § 103 and claims 1, 2, 4, and 5 under 35 U.S.C. § 102(b). Applicants respectfully traverse the Examiner's rejections and requests reconsideration and withdrawal of the rejection based on the following remarks.

#### **Rejection of claims 1 – 6 under 35 U.S.C. § 103**

The Examiner rejects claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over Kozai et al (JP 2001-17099) in view of Kishida et al (JP 9-163943), Iwamoto et al (6,316,042), Numata et al (JP2000-166491), Takami et al (JP 9-322725), Takami et al (6,436,462) and applicants admission of the prior art, further in view of Monte (3,914,524), Gebert et al (6,063,402), Morningstar (3,294,523) and Nakamura et al (6,045,847).

In order to determine whether a claimed invention is unpatentable under 35 U.S.C. § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

When applying 35 U.S.C. § 103, the following tenets of patent law must be adhered to:

The claimed invention must be considered as a whole;

The references must be considered as a whole;

The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and

Reasonable expectation of success is the standard with which obviousness is determined.

See, e.g., *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

The prior art references relied upon by the Examiner do not support a rejection under 35 U.S.C. § 103. Claims 1 through 6 have been canceled and replaced with claims 7 through 9. In independent claim 7, Applicants' claim a cooked rice superior in low temperature tolerance containing water-soluble soybean polysaccharides, erythritol, and amylase selected from  $\beta$ -amylase and glucoamylase, wherein the cooked rice product resists retrogradation when stored under low temperature refrigeration or freezing temperatures for a period of at least four days. The references fail to disclose all of the elements of Applicants' invention and fail to suggest any combination or modification of their teachings.

With respect to the scope and content of the prior art references relied upon by the Examiner, none of the prior art references cited by the Examiner teaches the combination of water-soluble soybean polysaccharides, erythritol, and amylase selected from  $\beta$ -amylase and glucoamylase. In addition, none of the references teaches a cooked rice product that is able to resist retrogradation during low temperature storage for at least four days. It should be particularly noted that the US Patent 6,316,042 to Iwamoto et al. ("Iwamoto") discloses examples in which cooked rice is prepared with soybean polysaccharides, an enzyme preparation, and trehalose. Iwamoto's teaching corresponds to a comparative example disclosed in Applicants' specification, Comparative Example 6, which demonstrates that the rice prepared

using Iwamoto's teaching maintained good quality for only two days after cooking, but deteriorated thereafter. Also, Takami et al. ('462) discourages the use of an enzyme, sugar alcohol, a polysaccharide, or a combination of any of the preceding additives because they are unable to maintain the edible quality of the rice after 24-hours in cold storage. (col. 1, lines 21-40); therefore, Takami et al. ('462), focuses on the phosphorus content of the rice to preserve the cooked product in cold storage. Takami et al. ('462) does suggest the incorporation of additional additives; however there is no discussion of the use of soybean polysaccharides, erythritol, or how to combine these additives to produce a cooked rice product that can resist degradation in cold storage for at least 4 days (col. 5, lines 36 - 56).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

Regarding claims 1 through 6, the Examiner asserts that Kozai et al. discloses cooked rice and a method of producing cooked rice wherein the rice has added to it a saccharide such as trehalose, a gum such as guar or xanthan, and amylase (an enzyme). The Examiner admits that Kozai et al. fails to disclose the use of soybean polysaccharides and a sugar alcohol. The Examiner then asserts that Numata et al. teaches the equivalency of trehalose or soybean derived

hemicellulose for use in cooked rice preservation and asserts that Monte is evidence of moisture retention as an inherent property of a sugar alcohol and thickeners inherently have the property of binding, retaining, or immobilizing water. Because Kozai et al. discloses the use of guar or xanthan gum as thickeners, the Examiner opines that to modify Kozai et al and substitute the soybean derived polysaccharide for the trehalose for its recognized function and to either add the sugar alcohol to the composition of Kozai et al. or substitute one water retaining agent for another (i.e. the sugar alcohol for the gum) would have been obvious to a person having ordinary skill in the art at the time Applicants' invention was made. The Examiner further relies on various references, including Kishida et al., Iwamoto et al., Takami et al. ('462), Takami et al. ('725), and Nakamura et al., and asserts that the references disclose the conventionality of combining additives for enhancing the preservation of cooked rice in cold storage. The Examiner further asserts that the art taken as a whole discloses various mechanisms to enhance cold storage of cooked rice, and that two or more mechanisms can be combined to enhance cooked rice storage, and one would expect that combining two or more mechanisms to improve storage would yield a better result than a lesser number of different mechanisms. Applicants' respectfully disagree.

The prior art references fail to disclose all of the elements of Applicants' invention. None of the prior art references cited by the Examiner teaches the combination of water-soluble soybean polysaccharides, erythritol, and amylase selected from  $\beta$ -amylase and glucoamylase. In addition, none of the references teaches a cooked rice product that is able to resist retrogradation during low temperature storage for at least four days. Therefore the cited references would not suggest to a person having ordinary skill in the art at the time the invention was made the

appropriate additives to use, or the proper combination of additives without Applicants' disclosure. The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. The Examiner cannot base the rejection on the fact that the references suggest combining additives with no suggestion or motivation to combine soybean polysaccharides, erythritol, and amylase selected from  $\beta$ -amylase and glucoamylase in a combination that will impart a low temperature tolerance to a cooked rice product, so that the cooked rice product will resist retrogradation for at least four days. The Examiner incorrectly states that one would expect that combining two or more mechanisms to improve storage would yield a better result than a lesser number of different mechanisms. Iwamoto discloses the use of soybean polysaccharides, an enzyme preparation, and trehalose and as previously discussed this combination corresponds to Comparative Example 6 as disclosed in the present specification. In Comparative Example 6, erythritol was used in place of trehalose. This combination was not as effective as Applicants' invention; therefore an equal number of mechanisms achieved a better result, which is counter to the Examiner's expectation. The teaching in Takami et al. ('462) that a combination of saccharide, enzyme, and sugar alcohol will not maintain the quality of cooked rice in cold storage longer than 24 hours and the failure of the teaching in Iwamoto to produce a cooked rice product that can resist retrogradation for more than two days would suggest to a person having ordinary skill at the time Applicants' invention was made that there is no reasonable expectation of success that any combination of additives will improve the low temperature tolerance of cooked rice in frozen storage for at least four days.

The Examiner also rejected claims 3 and 6 under 35 U.S.C. § 103 in view of Iwamoto as further evidenced by Takami et al ('462) and asserts that the particular sugar alcohol that one

selects is seen to have been an obvious matter of choice. Applicants' respectfully disagree.

Claim 7 as currently amended includes the element of erythritol and the Examiner provides no justification for the selection of erythritol other than that it would be an obvious matter of choice. None of the references suggest the combination of erythritol with soybean polysaccharide and amylase selected from  $\beta$ -amylase and glucoamylase. In addition, none of the references teach a combination of additives that will impart a resistant quality to cooked rice like Applicants' invention. As previously discussed, Takami et al. ('462) teaches away from the disclosure of Iwamoto because Takami ('462) states that the combination of a saccharide, sugar alcohol, and enzyme alone is unable to maintain the edible quality of cooked rice in cold storage for greater than 24-hours and suggests increasing the phosphorus content of the cooked rice to impart improved resistance to retrogradation.

The Examiner also commented on the experimental results provided in the present specification and noted that there is no discussion of the number of trials performed or the identity or number of people who made the qualitative determinations of the comparative examples. Applicants' appreciate the Examiner's comments; however, the number of test trials performed and the number of people who performed the trials is irrelevant to the issue of obviousness. Applicants' specification complies with the requirements of 35 U.S.C. § 112.

Thus, the references relied upon by the Examiner would not suggest Applicants' invention to a person having ordinary skill in the art at the time Applicants' invention was made.

**Rejection of claims 1, 2, 4, and 5 under 35 U.S.C. § 102(b)**

The Examiner rejected claims 1, 2, 4, and 5 under 35 U.S.C. § 102(b) as being unpatentable over Iwamoto (6,316,042), as further evidenced by Takami et al (6,436,462). The Examiner asserts that Iwamoto discloses cooked rice for chilling or freezing, which has added to it soybean polysaccharide, amylase and trehalose and Takami et al ('462) discloses the latter being a sugar alcohol. The Examiner then opines that Iwamoto anticipates the claims and would inherently have any properties or capabilities that the recited product possesses. Applicants' respectfully disagree.

Applicants' independent claim currently includes the elements of cooked rice superior in low temperature tolerance containing water-soluble soybean polysaccharides, erythritol, and amylase selected from  $\beta$ -amylase and glucoamylase, wherein the cooked rice product resists retrogradation when stored under low temperature refrigeration or freezing temperatures for a period of at least four days. Neither Takami et al. ('462), nor Iwamoto disclose the element of erythritol combined with soybean polysaccharide and amylase selected from  $\beta$ -amylase and glucoamylase. As previously discussed, Iwamoto does not have the same properties or capabilities of Applicant's invention because Iwamoto does not disclose a combination of additives that will resist retrogradation for at least four days when the cooked rice is stored in low or freezing temperatures. Thus, Iwamoto and Takami et al ('462) fail to anticipate Applicants' invention.

## CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that the claims presented herewith are patentable over the prior art of record and in condition for allowance. Applicant respectfully solicits prompt action thereon. If any questions remain, the Examiner is invited to phone the undersigned attorney.

Date: May 21, 2007

Order No. 4908

Respectfully submitted,

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